Exploring Aeronautics			
2004 Mathematics			
Curriculum Framework			
Arkansas Mathematics			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Science of Flight	AR	MA.5.A.6.5.1	Draw conclusions and make predictions, with and without appropriate technology, from models, tables and line graphs
Science of Flight	AR	MA.5.DAP.14.5.1	Develop appropriate questions for surveys
Science of Flight	AR	MA.5.DAP.14.5.2	Collect numerical and categorical data using surveys, observations and experiments that would result in bar graphs, line graphs, line plots and stem-and-leaf plots
Integrating with Aeronautics	AR	MA.5.NO.1.5.1.b.1	Use models and visual representations to develop the concepts of the following: Ratios (part-to-part (2 boys to 3 girls))
Integrating with Aeronautics	AR	MA.5.NO.1.5.1.b.2	Use models and visual representations to develop the concepts of the following: Ratios (part-to-whole (2 boys to 5 people))
Integrating with Aeronautics	AR	MA.5.M.12.5.1	Identify and select appropriate units and tools to measure
Integrating with Aeronautics	AR	MA.5.DAP.14.5.3	Construct and interpret frequency tables, charts, line plots, stem-and-leaf plots and bar graphs
Integrating with Aeronautics	AR	MA.5.DAP.15.5.1	Interpret graphs such as line graphs, double bar graphs, and circle graphs
Scientific Method(124-144)	AR	MA.5.A.6.5.1	Draw conclusions and make predictions, with and without appropriate technology, from models, tables and line graphs
Scientific Method(124-144)	AR	MA.5.DAP.14.5.2	Collect numerical and categorical data using surveys, observations and experiments that would result in bar graphs, line graphs, line plots and stem-and-leaf plots
Scientific Method(124-144)	AR	MA.5.DAP.14.5.3	Construct and interpret frequency tables, charts, line plots, stem-and-leaf plots and bar graphs
Scientific Method(124-144)	AR	MA.5.DAP.15.5.1	Interpret graphs such as line graphs, double bar graphs, and circle graphs
Exploring Aeronautics			
2004 Mathematics			
Curriculum Framework			
Arkansas Mathematics			
Grade 6			
Activity/Lesson	**State**	**Standards**	
The Resource Center	AR	MA.6.NO.1.6.4	Convert, compare and order fractions (mixed numbers and improper fractions) decimals and percents and find their approximate locations on a number line
The Resource Center	AR	MA.6.M.13.6.5	Find the distance between two points on a number line

Science of Flight	AR	MA.6.DAP.14.6.1	Formulate questions, design studies, and collect data about a characteristic shared by two populations or different characteristics within one population
Science of Flight	AR	MA.6.DAP.14.6.2	Collect data and select appropriate graphical representations to display the data including Venn diagrams
Integrating with Aeronautics	AR	MA.6.NO.1.6.1	Demonstrate conceptual understanding to find a specific percent of a number, using models, real-life examples, or explanations
Integrating with Aeronautics	AR	MA.6.NO.1.6.4	Convert, compare and order fractions (mixed numbers and improper fractions) decimals and percents and find their approximate locations on a number line
Integrating with Aeronautics	AR	MA.6.NO.3.6.3	Solve, with and without appropriate technology, multi-step problems using a variety of methods and tools (i.e., objects, mental computation, paper and pencil)
Integrating with Aeronautics	AR	MA.6.NO.3.6.6	Use proportional reasoning and ratios to represent problem situations and determine the reasonableness of solutions with and without appropriate technology
Scientific Method(124-144)	AR	MA.6.DAP.14.6.2	Collect data and select appropriate graphical representations to display the data including Venn diagrams
Scientific Method(124-144)	AR	MA.6.DAP.14.6.3	Construct and interpret graphs, using correct scale, including line graphs and double-bar graphs
Scientific Method(124-144)	AR	MA.6.DAP.15.6.1	Interpret graphs such as double line graphs and circle graphs
Scientific Method(124-144)	AR	MA.6.DAP.15.6.2	Compare and interpret information provided by measures of central tendencies (mean, median and mode) and measures of spread (range)
Exploring Aeronautics			
2004 Mathematics			
Curriculum Framework			
Arkansas Mathematics			
Grade 7			
Activity/Lesson	**State**	**Standards**	
Wings(177-208)	AR	MA.7.M.12.7.3	Find different areas for a given perimeter and find a different perimeter for a given area
The Resource Center	AR	MA.7.NO.1.7.5	Compare and represent integers, fractions, decimals and mixed numbers and find their approximate location on a number line
Science of Flight	AR	MA.7.DAP.14.7.1	Identify different ways of selecting samples and compose appropriate questions
Integrating with Aeronautics	AR	MA.7.NO.1.7.1	Relate, with and without models and pictures, concepts of ratio, proportion, and percent, including percents less than 1 and greater than 100

Integrating with Aeronautics	AR	MA.7.NO.1.7.5	Compare and represent integers, fractions, decimals and mixed numbers and find their approximate location on a number line
Integrating with Aeronautics	AR	MA.7.NO.3.7.2	Solve with and without appropriate technology, multi-step problems using a variety of methods and tools (i.e., objects, mental computation, paper and pencil)
Integrating with Aeronautics	AR	MA.7.NO.3.7.3	Determine when an estimate is sufficient and use estimation to decide whether answers are reasonable in problems including fractions and decimals
Scientific Method(124-144)	AR	MA.7.DAP.14.7.1	Identify different ways of selecting samples and compose appropriate questions
Scientific Method(124-144)	AR	MA.7.DAP.14.7.2	Explain which types of display are appropriate for various data sets (line graph for change over time, circle graph for part-to-whole comparison, scatter plot for trends)
Scientific Method(124-144)	AR	MA.7.DAP.15.7.1	Analyze data displays, including ways that they can be misleading
Scientific Method(124-144)	AR	MA.7.DAP.15.7.2	Analyze, with and without appropriate technology, a set of data by using and comparing measures of central tendencies (mean, median, mode) and measures of spread (range, quartile, interquartile range)
Exploring Aeronautics			
2004 Mathematics			
Curriculum Framework			
Arkansas Mathematics			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Wings(177-208)	AR	MA.8.M.12.8.1	Understand, select and use, with and without appropriate technology, the appropriate units and tools to measure angles, perimeter, area, surface area and volume to solve real world problems
The Resource Center	AR	MA.8.NO.1.8.3	Compare and order real numbers including irrational numbers and find their approximate location on a number line (Use technology when appropriate)
Science of Flight	AR	MA.8.G.8.8.1	Form generalizations and validate conclusions about properties of geometric shapes
Integrating with Aeronautics	AR	MA.8.NO.1.8.3	Compare and order real numbers including irrational numbers and find their approximate location on a number line (Use technology when appropriate)
Integrating with Aeronautics	AR	MA.8.NO.3.8.3	Use estimation to solve problems involving rational numbers; including ratio, proportion, percent (increase or decrease) then judge the reasonableness of solutions
Integrating with Aeronautics	AR	MA.8.A.4.8.3	Interpret and represent a two operation function as an algebraic equation

Integrating with Aeronautics	AR	MA.8.G.8.8.3	Determine appropriate application of geometric ideas and relationships, such as congruence, similarity, and the Pythagorean theorem, with and without appropriate technology
Integrating with Aeronautics	AR	MA.8.M.13.8.4	Find the distance between two points on a coordinate plane using with the Pythagorean theorem
Scientific Method(124-144)	AR	MA.8.G.8.8.1	Form generalizations and validate conclusions about properties of geometric shapes
Scientific Method(124-144)	AR	MA.8.DAP.14.8.2	Explain which types of display are appropriate for various data sets (scatter plot for relationship between two variants and line of best fit)
Scientific Method(124-144)	AR	MA.8.DAP.17.8.2	Make predictions based on theoretical probabilities, design and conduct an experiment to test the predictions, compare actual results to predict results, and explain differences